MULTIPLE COMPACT DISC PLAYER

DP-R3070/R4070/R5070

SERVICE MANUAL

KENWOOD

V02209

©1994-12 PRINTED IN KOREA

B51-4998-00 (K) 3992

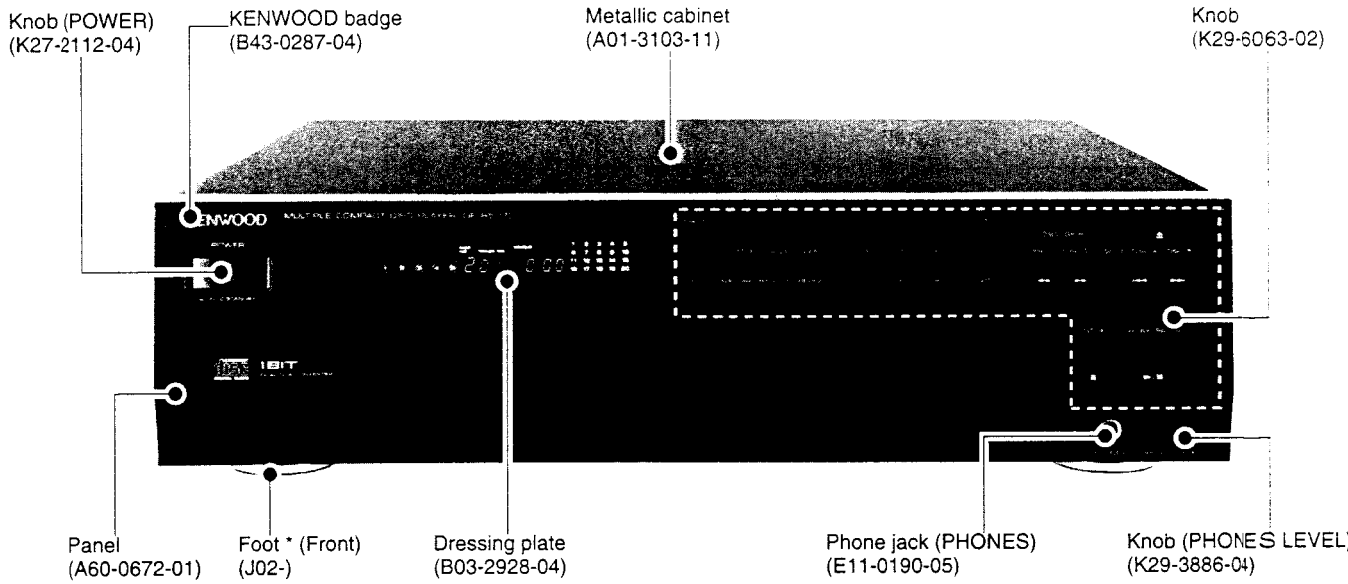


Photo is DP-R5070.

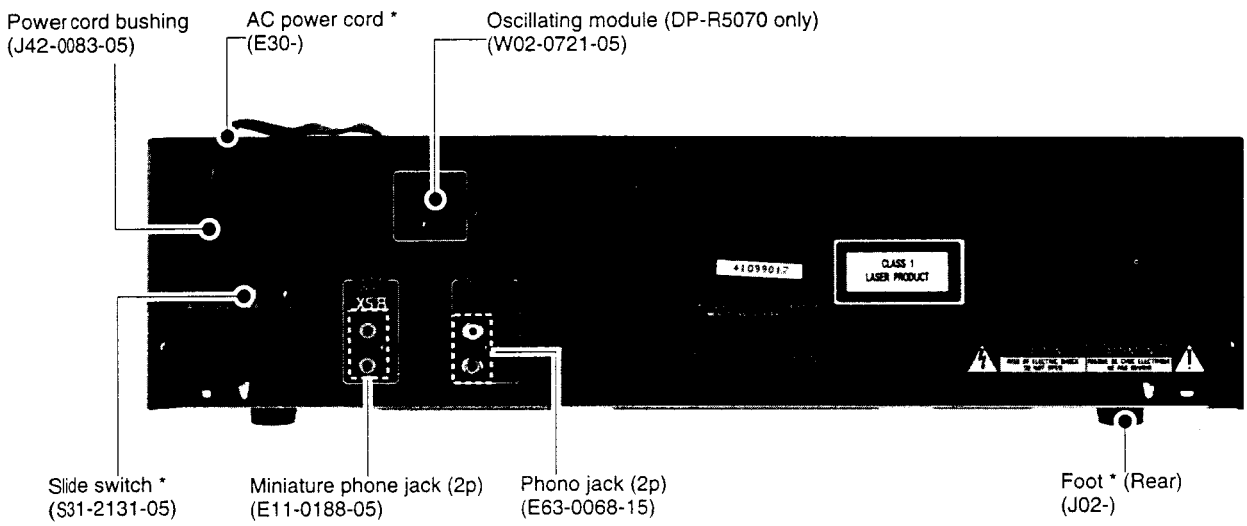


Photo is DP-R5070.

In complicance with Federal Regulations, following are reproductions of labels on, or inside the product relating to laser product safety.

KENWOOD-Corp. certifies this equipment conforms to DHHS Regulations No. 21 CFR 1040. 10, Chapter 1, Subchapter J.

DANGER : Laser radiation when open and interlock defeated.
AVOID DIRECT EXPOSURE TO BEAM.

*** Refer to parts list on page 20.**

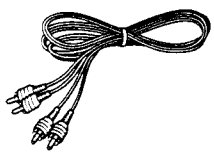
DP-R3070/R4070/R5070

CONTENTS / ACCESSORIES

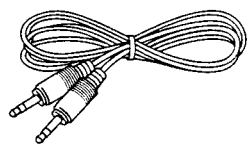
EXTERNAL VIEW 3
CONTROLS 4
REMOTE CONTROL OPERATION 5
BLOCK DIAGRAM 6
CIRCUIT DESCRIPTION 7
ADJUSTMENT 9
PC BOARD 11
SCHEMATIC DIAGRAM 13
EXPLODED VIEW (MECHANISM) 17
EXPLODED VIEW (UNIT) 18
PARTS LIST 20
SPECIFICATIONS .....Back cover

Accessories

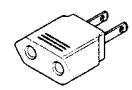
Audio cord (1)
(E30-0505-05)



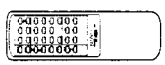
System control cord (1)
(E30-2733-05)



AC plug adaptor (1)
(E03-0115-05)
M type only

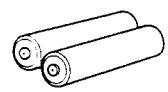


Remote control unit (1)
(A70-0971-05: RC-P0501 for DP-R5070)
(A70-0972-05: RC-P0401 for DP-R4070)



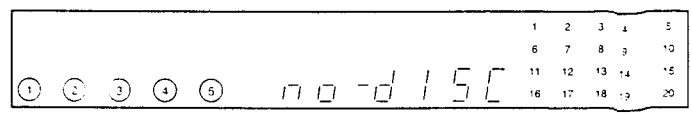
Battery cover: (A09-0170-08)

Batteries (R6/AA) (2)



Caution

Note related to transportation and movement
Before transporting or moving this unit, carry out the following operations.
1. Turn the power ON but do not load a disc.
2. Wait a few seconds and verify that the display shown appears. Wait further a few seconds.
3. Turn the power OFF.



EXTERNAL VIEW

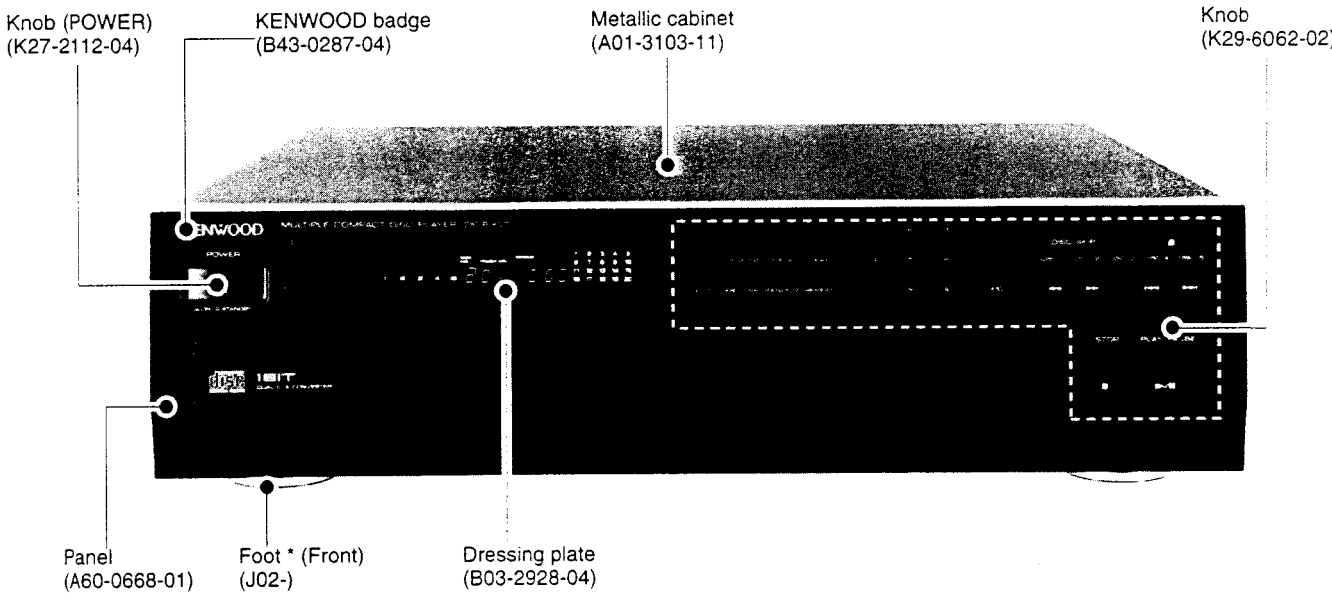


Photo is DP-R3070.

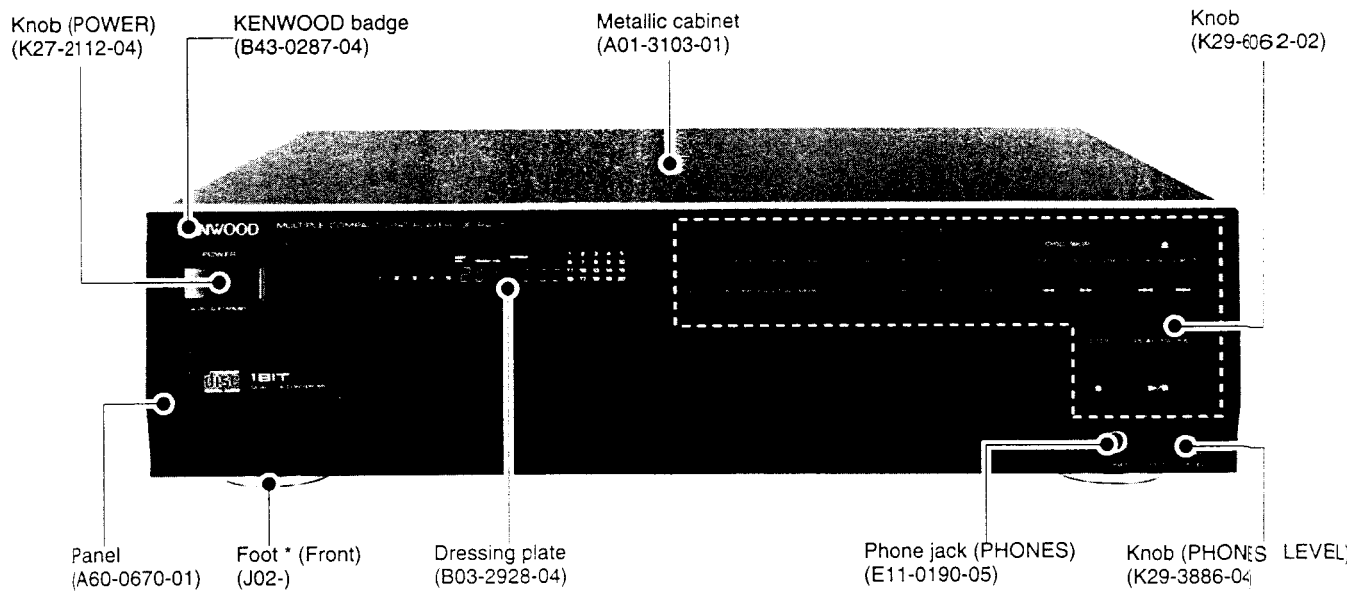
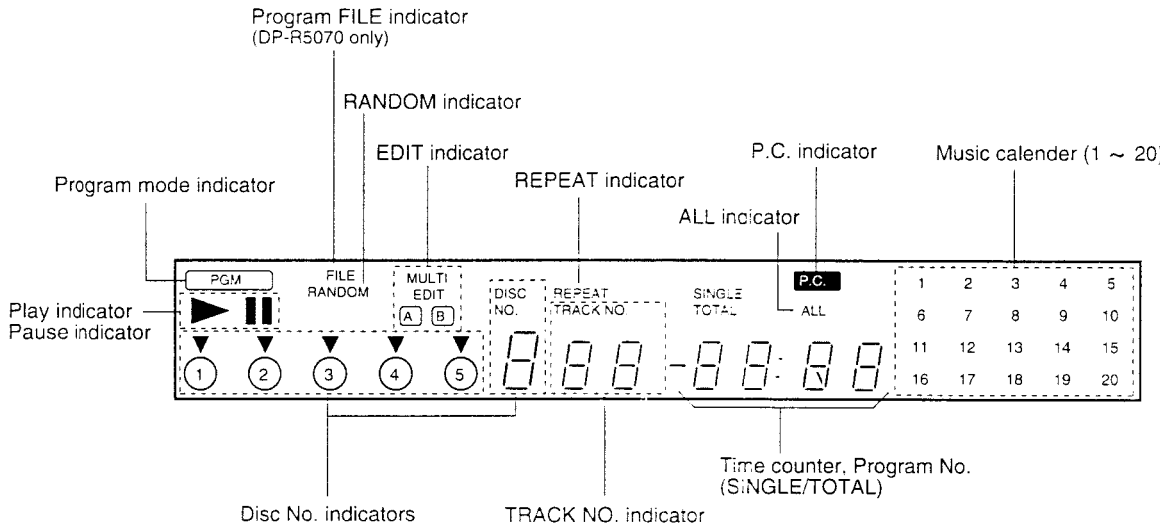
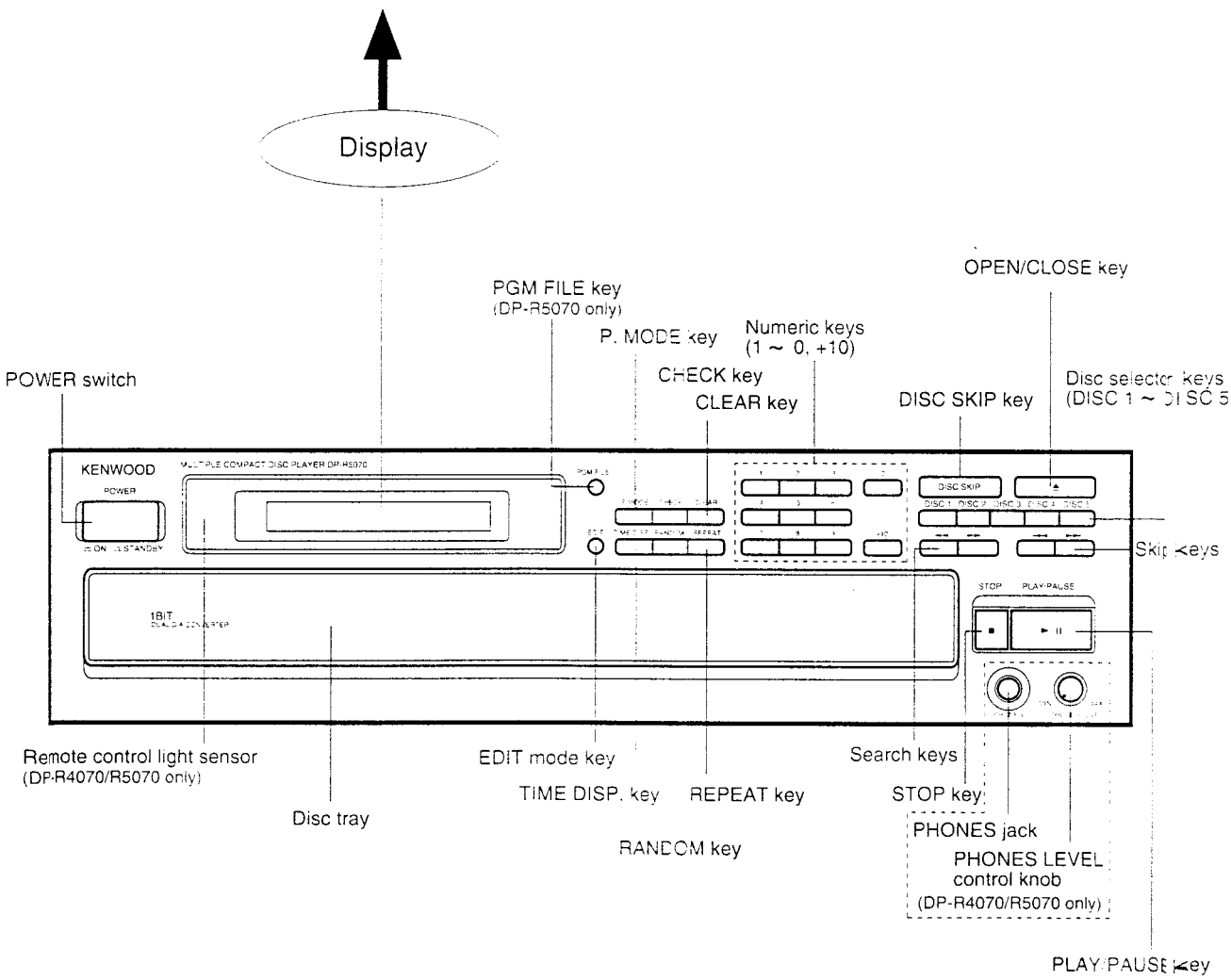


Photo is DP-R4070.

* Refer to parts list on page 21.

CONTROLS


Program FILE indicator
(DP-R5070 only)
RANDOM indicator
EDIT indicator
P.C. indicator
Music calender (1 ~ 20)
Program mode indicator
REPEAT indicator
ALL indicator
PGM
FILE
RANDOM
MULTI
EDIT
A B
DISC
NO.
REPEAT
TRACK NO
SINGLE
TOTAL
P.C.
ALL
1 2 3 4 5
6 7 8 9 10
11 12 13 14 15
16 17 18 19 20
Play indicator
Pause indicator
1 2 3 4 5
Time counter, Program No.
(SINGLE/TOTAL)
Disc No. indicators
TRACK NO. indicator


Display
OPEN/CLOSE key
PGM FILE key
(DP-R5070 only)
P. MODE key
Numeric keys
(1 ~ 0, +10)
POWER switch
CHECK key
CLEAR key
DISC SKIP key
Disc selector keys
(DISC 1 ~ DISC 5)
KENWOOD
POWER
DISC SKIP
Skip keys
STOP
PLAY·PAUSE
Remote control light sensor
(DP-R4070/R5070 only)
EDIT mode key
Search keys
Disc tray
TIME DISP. key
REPEAT key
STOP key
RANDOM key
PHONES jack
PHONES LEVEL
control knob
(DP-R4070/R5070 only)
PLAY·PAUSE key

* New Parts
Parts without Parts No. are not supplied.
Les articles non mentionnes dans le Parts No. ne sont pas fournis.
Teile ohne Parts No. werden nicht geliefert.

❺

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格			Destination 仕向	Remarks 備考
S33			S40-1064-05	PUSH SWITCH PGM FILE				5
D1 -9			HSS104	DIODE				
D1 -9			1SS133	DIODE				
D10			HSS104	DIODE				5
D10			1SS133	DIODE				5
ED1			10-BT-131GK	INDICATOR TUBE				
Q1 ,2			2SC2021F	TRANSISTOR				
A1			W02-1046-05	ELECTRIC CIRCUIT MODULE			(4/5)	
CD PLAYER UNIT (X32-2870-XX)								
C1			CK73FB1H103K	CHIP C	0.010UF	K		
C2			CK73FB1H472K	CHIP C	4700PF	K		
C3			CC73FSL1H470J	CHIP C	47PF	J		
C4			CK73FF1C474Z	CHIP C	0.47UF	Z		
C5			CE04LW1A101M	ELECTRO	100UF	10WV		
C6			CK73FB1E104K	CHIP C	0.10UF	K		
C7			CE04HW1HR47M	NP-ELEC	0.47UF	50WV		
C8			CK73FB1E104K	CHIP C	0.10UF	K		
C9			CK73FB1H102K	CHIP C	1000PF	K		
C10			CC73FSL1H221J	CHIP C	220PF	J		
C11			CK73FB1H333K	CHIP C	0.033UF	K		
C12			CC73FSL1H101J	CHIP C	100PF	J		
C13 ,14			CE04HW1E100M	NP-ELEC	10UF	25WV		
C15			CK73FB1H103K	CHIP C	0.010UF	K		
C16			CK73FB1H333K	CHIP C	0.033UF	K		
C17 ,18			CK73FB1H103K	CHIP C	0.010UF	K		
C19			CE04LW0J331M	ELECTRO	330UF	6.3WV		
C20			CK73FB1H103K	CHIP C	0.010UF	K		
C21 ,22			CC73FSL1H150J	CHIP C	15PF	J		
C23 ,24			CE04LW1A101M	ELECTRO	100UF	10WV	(4/5)	
C25			CE04LW1A470M	ELECTRO	47UF	10WV		
C26 ,27			CE04LW1A101M	ELECTRO	100UF	10WV		
C28			CC73FSL1H270J	CHIP C	27PF	J		
C29			CK73FB1H222K	CHIP C	2200PF	K		
C30			CK73FB1H333K	CHIP C	0.033UF	K		
C31			CK73FB1H103K	CHIP C	0.010UF	K		
C32			CK73FB1H222K	CHIP C	2200PF	K		
C33			CE04LW1A101M	ELECTRO	100UF	10WV		
C34			CE04LW1H010M	ELECTRO	1.0UF	50WV		
C35			CK73FB1H102K	CHIP C	1000PF	K		
C36			CE04LW1A101M	ELECTRO	100UF	10WV		5
C37			CK73FB1H473K	CHIP C	0.047UF	K		
C38			CK73FB1H152K	CHIP C	1500PF	K		
C39			CK73FB1H103K	CHIP C	0.010UF	K		
C40			CE04LW1HR47M	ELECTRO	0.47UF	50WV		
C41			CK73FB1H103K	CHIP C	0.010UF	K		
C42			CE04LW0J331M	ELECTRO	330UF	6.3WV		
C43			CK73FB1H103K	CHIP C	0.010UF	K		
C44			CE04LW1A101M	ELECTRO	100UF	10WV		
C45 ,46			CK73FB1E104K	CHIP C	0.10UF	K		
C47 ,48			CE04LW1A101M	ELECTRO	100UF	10WV		
C49			CE04LW0J331M	ELECTRO	330UF	6.3WV		
C50			CK73FB1H103K	CHIP C	0.010UF	K		5
C51 ,52			CK73FB1H103K	CHIP C	0.010UF	K		

L:Scandinavia K:USA P:Canada 3:DP-R3070
Y:PX(Far East, Hawaii) T:England E:Europe 4:DP-R4070
Y:AAFES(Europe) X:Australia M:Other Areas 5:DP-R5070 ⚠ indicates safety critical components.

* New Parts
Parts without Parts No. are not supplied.
Les articles non mentionnes dans le Parts No. ne sont pas fournis.
Teile ohne Parts No. werden nicht geliefert.

❻

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格			Destination 仕向	Remarks 備考
C53			CC73FSL1H101J	CHIP C	100PF	J		5
C54			CK73FB1H103K	CHIP C	0.010UF	K		5
C55 -58		*	C93-0028-05	CERAMIC	1500P			
C59 ,60			CE04LW1V100M	ELECTRO	10UF	35WV		
C61 ,62			CK73FB1H103K	CHIP C	0.010UF	K		
C63 ,64		*	C93-0029-05	CERAMIC	1800P			
C65 ,66			CE04LW1H010M	ELECTRO	1.0UF	50WV	(4/5)	
C67 ,68			CK73FB1H103K	CHIP C	0.010UF	K	(4/5)	
C69 ,70			CK73FB1H102K	CHIP C	1000PF	K	(4/5)	
C71			CK73FB1H103K	CHIP C	0.010UF	K		
C72 ,73			CC73FSL1H221J	CHIP C	220PF	J		
C74			CE04LW1C222M	ELECTRO	2200UF	16WV		
C75			CE04LW1C331M	ELECTRO	330UF	16WV		
C76			CE04LW1H101M	ELECTRO	100UF	50WV		
C77			CK73FB1H103K	CHIP C	0.010UF	K		
C78			CE04LW1V100M	ELECTRO	10UF	35WV		
C79 ,80			CC73FSL1H470J	CHIP C	47PF	J		5
C81			CE04LW1A470M	ELECTRO	47UF	10WV		
C82 -87			CK73FB1H103K	CHIP C	0.010UF	K		
C88			CK73FF1C224Z	CHIP C	0.22UF	Z		
C89			CK73FB1H332K	CHIP C	3300PF	K		
C90			CK73FB1H473K	CHIP C	0.047UF	K		
C91			CE04LW1C331M	ELECTRO	330UF	16WV	(4/5)	
C92			CK73FB1H103K	CHIP C	0.010UF	K	(4/5)	
C93 ,94			CK73FB1H102K	CHIP C	1000PF	K	(4/5)	
C95			CC73FSL1H220J	CHIP C	22PF	J		
C96			CK73FB1H103K	CHIP C	0.010UF	K		
C97			CK73FB1H103K	CHIP C	0.010UF	K	(4/5)	
C98			CK73FB1E104K	CHIP C	0.10UF	K		
C99			CK73FB1H102K	CHIP C	1000PF	K		
C100			CK73FF1C105Z	CHIP C	1.0UF	Z		5
J1			E63-0068-15	PHONO JACK LINE OUTPUT				
J2			E11-0188-05	MINIATURE PHONE JACK(2P)S.CONT				
J3			E11-0190-05	PHONE JACK PHONES			(4/5)	
-			J11-0098-05	WIRE CLAMPER				
L1			L40-1001-17	SMALL FIXED INDUCTOR(10UH,K)				
L2			L40-1011-17	SMALL FIXED INDUCTOR(100UH,K)				5
X1			L77-1164-05	CRYSTAL RESONATOR(16.9344MHZ)				5
X1			L78-0299-05	RESONATOR (16.93M)			(3/4)	
X2			L78-0602-05	RESONATOR (6.300MHZ)				
R99			RS14KB3D820J	FL-PROOF RS 82		J 2W		
VR1			R12-3687-05	TRIMMING POT.(33K)				
VR2			R12-3685-05	TRIMMING POT.(10K)				
VR3			R12-3688-05	TRIMMING POT.(47K)				
VR4			R12-3685-05	TRIMMING POT.(10K)				
VR5		*	R31-0043-05	VARIABLE RESISTOR(1K) PHONES			(4/5)	
W150-154			R92-0670-05	CHIP R 0 OHM				
⚠ S1			S31-2131-05	SLIDE SWITCH (POWER TYPE)			YM	
D1 -3			HSS104	DIODE				
D1 -3			1SS133	DIODE				
D4			MA110	DIODE				
D4			1SS355	DIODE				

L:Scandinavia K:USA P:Canada 3:DP-R3070
Y:PX(Far East, Hawaii) T:England E:Europe 4:DP-R4070
Y:AAFES(Europe) X:Australia M:Other Areas 5:DP-R5070 ⚠ indicates safety critical components.

* New Parts
Parts without Parts No. are not supplied.
Les articles non mentionnes dans le Parts No. ne sont pas fournis.
Teile ohne Parts No. werden nicht geliefert.

❸

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
-		*	H10-7023-02	POLYSTYRENE FOAMED FIXTURE (L)	EG	W
-		*	H10-7024-02	POLYSTYRENE FOAMED FIXTURE (R)	KPYMX	W
-		*	H10-7024-02	POLYSTYRENE FOAMED FIXTURE (R)	EG	W
-		*	H10-7025-02	POLYSTYRENE FOAMED FIXTURE (L)	T	W
-		*	H10-7026-02	POLYSTYRENE FOAMED FIXTURE (R)	T	W
-			H13-0152-04	CARTON BOARD	X	
-			H13-0163-04	CARTON BOARD	T	
-			H20-0567-04	PROTECTION COVER	M	
-			H21-0303-04	PROTECTION SHEET		
-			H25-0232-04	PROTECTION BAG (235X350X0.03)	KPYMX	
-			H25-0232-04	PROTECTION BAG (235X350X0.03)	EG	
-			H25-0319-04	PROTECTION BAG	KPYXEG	
-			H25-0651-04	PROTECTION BAG (0232 PRINTED)	T	
-			H25-0657-04	PROTECTION BAG (0319 PRINTED)	T	
638	3F		J02-1024-05	FOOT FRNOT/REAR	TEG	
640	3F		J02-0366-15	FOOT REAR	KPYMX	
641	3F		J02-1122-05	FOOT FRONT	KPYMX	
642	2E		J21-3326-05	JACK MOUNTING HARDWARE		
⚠ 643	1F		J42-0083-05	POWER CORD BUSHING		
644	2D		J90-0811-04	GUIDE		
-			J61-0307-05	WIRE BAND	YMXTEG	
650	2D		K27-2112-04	KNOB POWER		
651	2E		K29-3886-04	KNOB PHONES LEVEL		
652	2D,2E		K29-6062-02	KNOB		
⚠ 660	2F		L07-0858-05	POWER TRANSFORMER	KP	
⚠ 660	2F		L07-0859-05	POWER TRANSFORMER	YM	
⚠ 660	2F		L07-0860-05	POWER TRANSFORMER	XTEG	
A	2F		N09-1561-05	TAPTITE SCREW (3X6,+-)		
B	2D,2E		N82-2608-46	BINDING HEAD TAPTITE SCREW		
C	1D,1F		N89-3008-45	BINDING HEAD TAPTITE SCREW		
D	1E,2F		N89-3008-46	BINDING HEAD TAPTITE SCREW		
DP-R5070						
601	1D		A01-3103-11	METALLIC CABINET		
603	2D	*	A60-0672-01	PANEL		
605	1C		A09-0170-08	BATTERY COVER		
606	1C		A70-0971-05	REMOTE CONTROLLER ASSY		
610	2D	*	B03-2928-04	DRESSING PLATE		
611	1D		B43-0287-04	KENWOOD BADGE		
-		*	B46-0092-43	WARRANTY CARD	KY	
-		*	B46-0096-53	WARRANTY CARD	X	
-			B46-0121-33	WARRANTY CARD	P	
-			B46-0197-00	QUESTIONAIRE CARD	K	
-			B46-0310-03	WARRANTY CARD	EG	
-			B58-0513-04	CAUTION CARD (PRESET220-240)	Y	
-		*	B58-0964-13	CAUTION CARD (CAUTION UL)	KY	
-		*	B58-0965-13	CAUTION CARD (TX TYPE PL)	X	
-		*	B58-0966-13	CAUTION CARD (ELM TYPE PL)	MEG	
-		*	B58-0967-03	CAUTION CARD (P TYPE PL)	P	
-		*	B58-0970-13	CAUTION CARD (RG TYPE PL)	G	
-		*	B59-1104-00	SERVICE DIRECTORY	Y	
-		*	B60-2007-00	INSTRUCTION MANUAL (EN)	KPYMXE	
-		*	B60-2008-00	INSTRUCTION MANUAL (FR)	PE	
-		-	B60-2009-00	INSTRUCTION MANUAL (DU)	HE	

L:Scandinavia K:USA P:Canada S:Singapore Made
Y:PX(Far East, Hawaii) T:England E:Europe W:Malaysia Made
Y:AAFES(Europe) X:Australia M:Other Areas
⚠ indicates safety critical components

* New Parts
Parts without Parts No. are not supplied.
Les articles non mentionnes dans le Parts No. ne sont pas fournis.
Teile ohne Parts No. werden nicht geliefert.

❹

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
-		*	B60-2010-00	INSTRUCTION MANUAL (C)	M	
-		*	B60-2011-00	INSTRUCTION MANUAL (D/IT)	E	
-		*	B60-2012-00	INSTRUCTION MANUAL (GER)	EG	
615	2D,2E		D14-0357-04	ROLLER		
⚠ 621	1C		E03-0115-05	AC PLUG ADAPTER	M	
622	1D		E30-0505-05	AUDIO CORD		
⚠ 624	1F		E30-2592-15	AC POWER CORD	MEG	
⚠ 624	1F		E30-2605-05	AC POWER CORD	Y	
⚠ 624	1F		E30-2650-05	AC POWER CORD	KP	
⚠ 624	1F		E30-2717-05	AC POWER CORD	X	
625	1C		E30-2733-05	CORD WITH PLUG		
		*	H50-1400-04	ITEM CARTON CASE	KPYXEG	S
		*	H50-1401-04	ITEM CARTON CASE	M	S
		*	H50-1402-04	ITEM CARTON CASE	KPYXEG	W
		*	H50-1403-04	ITEM CARTON CASE	M	W
-		*	H10-5937-02	POLYSTYRENE FOAMED FIXTURE (L)		S
-		*	H10-5938-02	POLYSTYRENE FOAMED FIXTURE (R)		S
-		*	H10-7023-02	POLYSTYRENE FOAMED FIXTURE (L)		W
-		*	H10-7024-02	POLYSTYRENE FOAMED FIXTURE (R)		W
-			H13-0152-04	CARTON BOARD	X	
-			H20-0567-04	PROTECTION COVER	M	
-			H21-0303-04	PROTECTION SHEET		
-			H25-0232-04	PROTECTION BAG (235X350X0.03)		
-			H25-0319-04	PROTECTION BAG	KPYXEG	
638	3F		J02-1024-05	FOOT FRONT/REAR	EG	
640	3F		J02-0366-15	FOOT REAR	KPYMX	
641	3F		J02-1122-05	FOOT FRONT	KPYMX	
642	2E		J21-3326-05	JACK MOUNTING HARDWARE		
⚠ 643	1F		J42-0083-05	POWER CORD BUSHING		
644	2D		J90-0811-04	GUIDE		
-			J61-0307-05	WIRE BAND	YMXEG	
650	2D		K27-2112-04	KNOB POWER		
651	2E		K29-3886-04	KNOB PHONES LEVEL		
652	2D,2E	*	K29-6063-02	KNOB		
⚠ 660	2F		L07-0858-05	POWER TRANSFORMER	KP	
⚠ 660	2F		L07-0859-05	POWER TRANSFORMER	YM	
⚠ 660	2F		L07-0860-05	POWER TRANSFORMER	XEG	
A	2F		N09-1561-05	TAPTITE SCREW (3X6,+-)		
B	2D,2E		N82-2608-46	BINDING HEAD TAPTITE SCREW		
C	1D,1F		N89-3008-45	BINDING HEAD TAPTITE SCREW		
D	1E,2F		N89-3008-46	BINDING HEAD TAPTITE SCREW		
MECHANISM PCB (X25-5500-10)						
PH1			T95-0132-05	OPTO ISOLATOR		
D1			SIR-33ST3	INFRARED LED		
PH2		*	RPT-38PT3F	PHOTO TRANSISTOR		
DISPLAY UNIT (X25-5610-1X)						
C1 ,2			CK45F1H103Z	CERAMIC 0.010UF Z		
C3			CK45F1H103Z	CERAMIC 0.010UF Z	(4/5)	
S1			S40-2351-05	PUSH SWITCH POWER		
S2 -32			S40-1064-05	PUSH SWITCH		

L:Scandinavia K:USA P:Canada S:Singapore Made 4:DP-R4070
Y:PX(Far East, Hawaii) T:England E:Europe W:Malaysia Made 5:DP-R5070
Y:AAFES(Europe) X:Australia M:Other Areas 3:DP-R3070
⚠ indicates safety critical components

DP-R3070/R4070/R5070

SPECIFICATIONS

DP-R3070/R4070

Format

System .....Compact disc digital audio system
Laser .....Semiconductor laser
Number of channels .....2 channels
Playing rotation .....200 rpm ~ 500 rpm (CLV)

D/A convertors

D/A conversion .....1 bit
Oversampling .....8 fs (352.8 kHz)

Audio

Frequency response .....4 Hz ~ 20 kHz, ±1.0 dB
Signal to noise ratio .....More then 96 dB
Dynamic range .....More than 94 dB
Total harmonic distortion + noise
.....Less than 0.007 % (at 1 kHz)
Channel separation .....More than 90 dB (at 1 kHz)
Wow & flutter .....Unmeasurable limit
Output level / impedance
Fixed .....2.0 V/ 3.3 kΩ
Headphone output (max.) .....20 mW/ 32 Ω
(DP-R4070 only)

General

Power consumption .....10 W
Dimensions .....W : 440 mm (17-5/16")
H : 123 mm (4-13/16")
D : 392 mm (15-7/16")
Weight (Net) .....5.0 kg (11.0 lb)

Note:
Component and circuity are subject to modification to insure best operation under differing local conditions. This manual is based on the U.S.A. (K) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

DP-R5070

Format

System .....Compact disc digital audio system
Laser .....Semiconductor laser
Number of channels .....2 channels
Playing rotation .....200 rpm ~ 500 rpm (CLV)

D/A convertors

D/A conversion .....1 bit
Oversampling .....8 fs (352.8 kHz)

Audio

Frequency response .....2 Hz ~ 20 kHz, ±1.0 dB
Signal to noise ratio .....More then 96 dB
Dynamic range .....More than 94 dB
Total harmonic distortion + noise
.....Less than 0.005 % (at 1 kHz)
Channel separation .....More than 92 dB (at 1 kHz)
Wow & flutter .....Unmeasurable limit
Output level / impedance
Fixed .....2.0 V/ 3.3 kΩ
Headphone output (max.) .....20 mW/ 32 Ω
Digital output
optical .....-15 dBm~-21 dBm
(Wave length 660 nm)

General

Power consumption .....10 W
Dimensions .....W: 440 mm (17-5/16")
H : 119 mm (4-11/16")
D : 394 mm (15-1/2")
Weight (Net) .....5.0 kg (11.0 lb)

KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

KENWOOD CORPORATION
14-6,Dogenzaka 1-chome, Shibuya-ku, Tokyo, 150 Japan

KENWOOD SERVICE CORPORATION
P.O BOX 22745, 2201 East Dominguez St., Long Beach, CA 90801-5745. U.S.A.

KENWOOD ELECTRONICS CANADA INC.
6070 Kestrel Road, Mississauga, Ontario, Canada L5T 1S8

KENWOOD ELECTRONICS LATIN AMERICA S.A.
P.O BOX 55-2791, Piso 6 plaza Chase, Cl. 47 y Aquilino de la Guardia Panama. Repulic de Panama

TRIO-KENWOOD U.K. LIMITED
KENWOOD House, Dwight Road, Watford, Herts., WD1 8EB., United Kingdom

KENWOOD ELECTRONICS BENELUX N.V.
Meachelsesteenweg 418, B-1930 Zaventem, Belgium

KENWOOD ELECTRONICS DEUTSCHLAND GMBH
Rembrücker Str. 15, 63150 Heusenstamm, Germany

TRIO-KENWOOD FRANCE S.A.
13 Boulevard Ney, 75018 Paris, France

KENWOOD ELECTRONICS ITALIA S.p.A.
Via G. Sirtori, 7/9 20129, Milano, Italy

KENWOOD ESPANA S.A.
Bolivia. 239-08020 Barcelona, Spain

KENWOOD ELECTRONICS AUSTRALIA PTY. LTD. (A.C.N. 001499 074)
P.O Box 504, 8 Figtree Drive, Australia Centre, Homebush, N.S.W. 2140. Australia

KENWOOD & LEE ELECTRONICS, LTD.
Unit 3712-3724, Level 37, Tower 1, Metroplaza, 223 Hing Fong Road, Kwai Fong N.T., Hong Kong

KENWOOD ELECTRONICS SINGAPORE PTE LTD.
No. 1 Genting Lane # 07-00, KENWOOD Building, Singapore, 1334

* New Parts
Parts without Parts No. are not supplied.
Les articles non mentionnes dans le Parts No. ne sont pas fournis.
Teile ohne Parts No. werden nicht geliefert.

❼

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
D5 ,6			HSS104	DIODE		
D5 ,6			1SS133	DIODE		
D7			RD6.8ES(B2)	ZENER DIODE		
D7			UZ-6.8BSB	ZENER DIODE		
D8 ,9			HSS104	DIODE		
D8 ,9			1SS133	DIODE		
D11 -16			HSS104	DIODE		
D11 -16			1SS133	DIODE		
D17 ,18			HSS104	DIODE	(4/5)	
D17 ,18			1SS133	DIODE	(4/5)	
D22			KBP02ML-6127	DIODE		
D23 ,24			S5688B(TPB5)	DIODE		
D23 ,24			1SR139-100(T64)	DIODE		
D25			RD30ES(B)	ZENER DIODE		
D25			UZ-30BS	ZENER DIODE		
D26			RD5.6ES(B2)	ZENER DIODE		
D26			UZ-5.6BSB	ZENER DIODE		
D34			RD5.6ES(B2)	ZENER DIODE		
D34			UZ-5.6BSB	ZENER DIODE		
IC1			CXA1782BQ	MOS-IC		
IC2			CXD2507AQ	MOS-IC		
IC3		*	M38174M8-264FP	MEMORY IC		
IC4			X24C16	MEMORY IC		5
IC5			BA6198FP	ANALOGUE IC		
IC6 ,7			TA8409S	IC(MOTOR CONTROL)		
IC8			NJM4565M	IC(OP AMP X2)		
IC9			NJM4580E	ANALOGUE IC	(4/5)	
IC10			SM5875BM	MOS-IC		
Q1			2SB1308(Q,R)	TRANSISTOR		
Q2			2SB1375	TRANSISTOR		
Q2			2SB1565(E,F)	TRANSISTOR		
Q5			2SB1308(Q,R)	TRANSISTOR		
Q7 ,8			2SC2878(B)	TRANSISTOR		
Q9			2SC1740S(Q,R)	TRANSISTOR		
Q9			2SC2785(F,E)	TRANSISTOR		
Q13			2SA954(L,K)	TRANSISTOR		
Q14			2SC4081(R,S)	TRANSISTOR		
Q15			DTA124EU	DIGITAL TRANSISTOR		
Q15			UN5112	TRANSISTOR		
A1			W02-1114-05	OSCILLATING MODULE OPTICAL		5
			MECHANISM (X92-1930-10/X92-1960-41)			
1	3B		A10-3121-32	CHASSIS ASSY		
2	1A	*	A11-1048-02	SUB CHASSIS		
3	1A		A11-1017-12	SUB CHASSIS		
DM	2B		A11-1038-08	TT CHASSIS ASSY		
5	2B	*	B09-0250-04	CAP		
7	2A		D10-3439-13	ARM		
8	2B		D10-3438-12	SLIDER		
9	1A		D13-1577-04	GEAR		
10	2A		D13-1578-04	GEAR		
11	2A		D13-1579-04	GEAR		
12	3C	*	D13-1682-04	WORM		
13	2D		D13-1581-04	GEAR		

L:Scandinavia K:USA P:Canada 3:DP-R3070
Y:PX(Far East, Hawaii) T:England E:Europe 4:DP-R4070
Y:AAFES(Europe) X:Australia M:Other Areas 5:DP-R5070
⚠ indicates safety critical components.

* New Parts
Parts without Parts No. are not supplied.
Les articles non mentionnes dans le Parts No. ne sont pas fournis.
Teile ohne Parts No. werden nicht geliefert.

❽

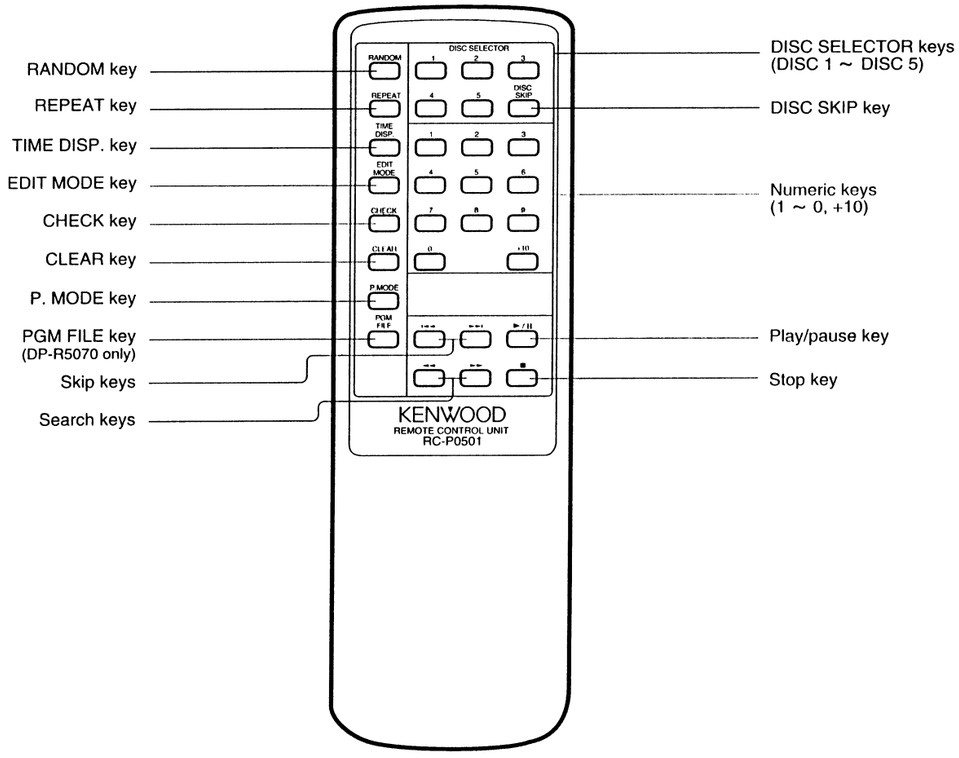
Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
16	3A		D15-0359-04	PULLEY		
17	1A		D16-0355-03	BELT		
18	2A		D21-1763-04	SHAFT		
19	2B		D10-3492-08	FEED SHAFT		
20	1B		D13-1643-08	GEAR (A)		
25	3D		E35-0747-15	FLAT CABLE		
26	1B		E35-0748-15	WIRING HARNESS		
27	1B		E35-0749-15	WIRING HARNESS		
29	2B		E35-0751-15	WIRING HARNESS		
30	2B		E40-3264-05	CONNECTOR (6P)		
35	1C		G01-3630-14	COMPRESSION SPRING		
36	2B	*	G01-3753-04	COMPRESSION SPRING (FRONT)		
37	2B	*	G01-3754-04	COMPRESSION SPRING (REAR)		
38	3A		G02-1049-04	FLAT SPRING		
39	3C		G09-0634-04	WIRE SPRING		
40	2A		G01-3697-24	EXTENSION SPRING		
41	2C	*	G02-1065-04	FLAT SPRING		
43	2B	*	J02-1121-04	INSULATOR		
44	1A		J11-0198-03	CLAMPER		
45	3D		J19-3634-04	HOLDER		
46	2A		J90-0811-04	GUIDE		
47	1F		J90-0810-22	GUIDE		
48	3C	*	J99-0556-01	TRAY		
49	2C		J99-0547-01	TRAY		
50	2B		J70-0619-08	MOTOR PCB		
55	2A,3A		S33-2061-05	LEVER SWITCH		
56	2B		S74-0038-08	LEAF SWITCH		
63	1A		T50-1055-04	YOKE		
64	1A		T99-0544-15	MAGNET		
FM	2B		T42-0676-08	MOTOR GEAR (FEED)		
LM	3A		T42-0524-05	DC MOTOR (LOADING)		
PU	1B		T25-0011-05	PICKUP (KSS-210A)		
RM	3C		T42-0670-05	DC MOTOR (TRAY-ROTARY)		

L:Scandinavia K:USA P:Canada
Y:PX(Far East, Hawaii) T:England E:Europe
Y:AAFES(Europe) X:Australia M:Other Areas
⚠ indicates safety critical components.

DP-R3070/R4070/R5070

REMOTE CONTROL OPERATION

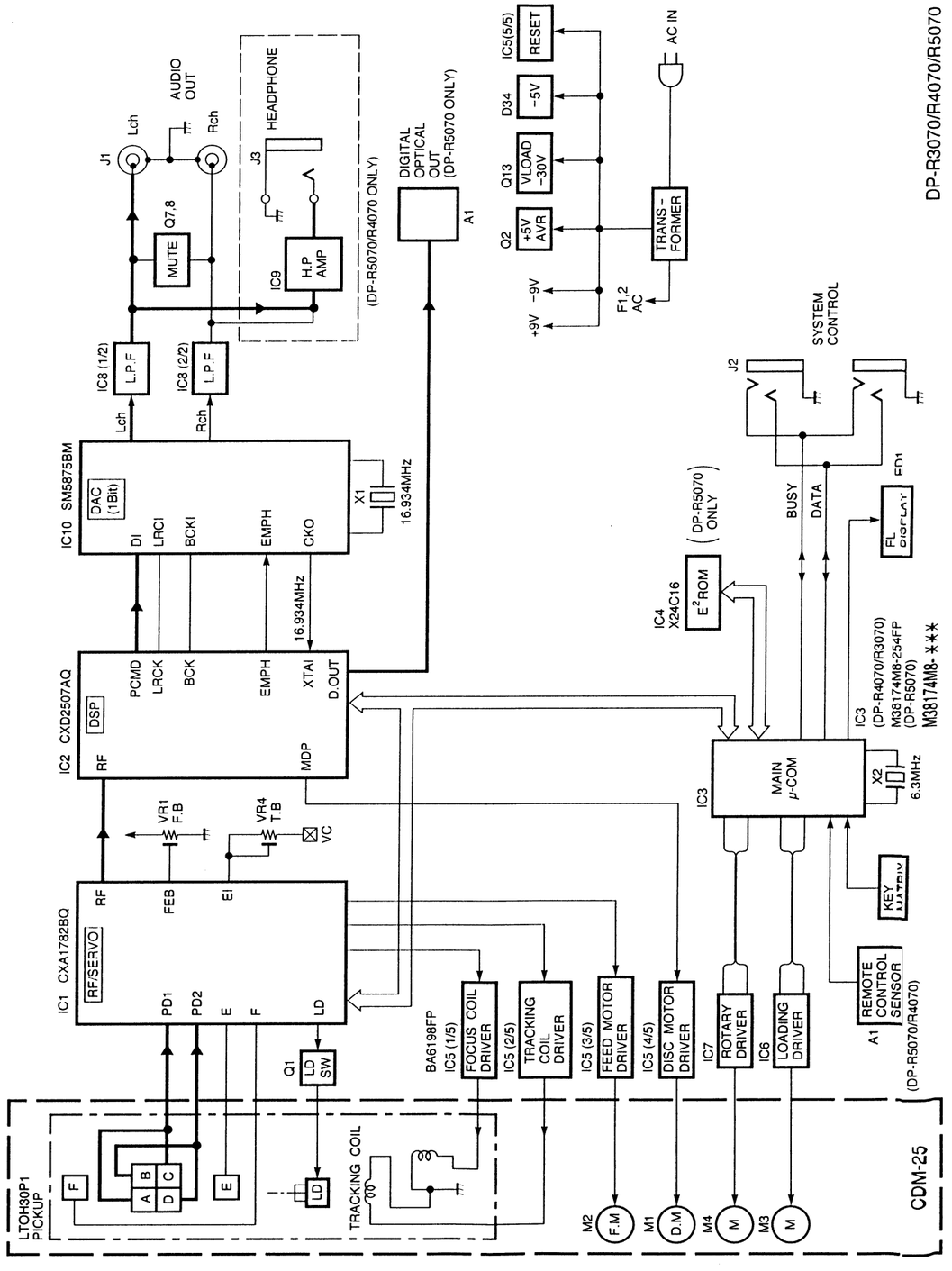
The operations of each are the same as those of the keys in the unit.



Model : RC-P0501
Infrared ray system

DP-R3070/R4070/R5070

BLOCK DIAGRAM



CIRCUIT DESCRIPTION

1. Test mode

1-1 Setting the test mode

- The microprocessor built in the unit can be put to TEST MODE by just pressing the P.MODE key when set to power on.
- DP-R series is available to set to each test mode by each key.

1-2 Key vs Function in test mode

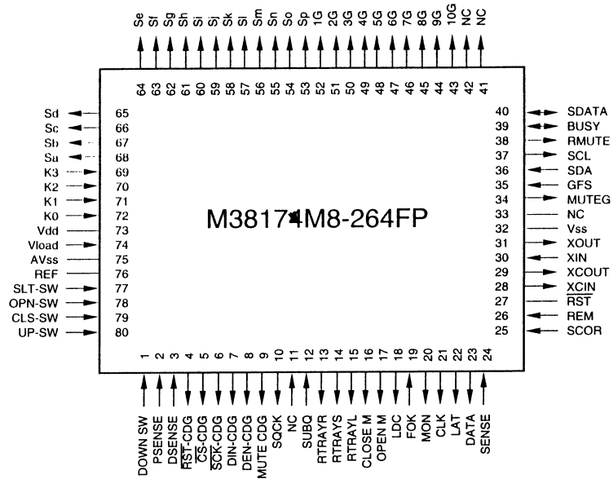
Step	Key name	Description	Display
1	STOP	(1) Focus servo.....OFF (2) Tracking servo.....OFF (3) Feed servo .....OFF	01
2	CHECK	(1) Focus servo.....ON (2) Tracking servo.....OFF (3) Feed servo .....OFF	03
3	PLAY	(1) Focus servo.....ON (2) Tracking servo.....ON (3) Feed servo .....ON	05
4	DISC1	Search the position of No. 1	
5	UP	Display goes on	
6	DOWN	Display goes off	

DP-R3070/R4070/R5070

CIRCUIT DESCRIPTION

2. Microprocessor : M38174M8-264FP (X32- A/4, IC3)

2-1 Pin connection



2-2 Pin description

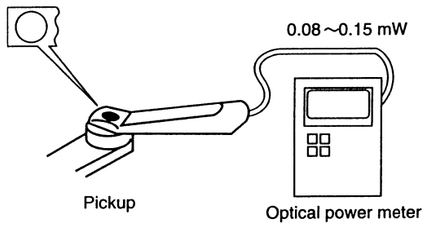
No.	Name	I/O	Description	No.	Name	I/O	Description
1	DOWN SW	I	Mechanism up switch signal input	27	RST		Reset
2	PSENSE	I	Position sensor detection	28	XCIN	I	Sub clock input
3	DSENSE	I	Disc sensor detection	29	XCOUT	O	Sub clock output
4	RST-CDG	O	Not used	30	XIN	I	Clock (6.3 MHz) input
5	CS-CDG	O	Not used	31	XOUT	O	Clock output
6	SCK-CDG	O	Not used	32	Vss		GND
7	DIN-CDG	O	Not used	33	NC		Not used
8	DEN-CDG	O	Not used	34	MUTEG	O	Digital mute control
9	MUTE CDG	O	Not used	35	GFS	I	Frame signal input
10	SQCK	O	Read clock for data	36	SDA	I/O	Clock control of X24C16 (EEPROM)
11	NC		Not used	37	SCL	O	Clock contol of X24C16 (EEPROM)
12	SUBQ	I	Q data input	38	RMUTE	O	Analog mute control
13	RTRAYR	O	Rotary tray motor control (CW)	39	BUSY	I/O	Serial BUSY signal I/O
14	RTRAYS	O	Rotary tray motor control (SPEED DOWN)	40	SDATA	I/O	Serial DATA signal I/O
15	RTRAYL	O	Rotary tray motor control (CCW)	41,42	NC		Not used
16	CLOSE M	O	Close motor control	43-52	1G-10G	O	Display digital control
17	OPEN M	O	Open motor control	53-68	Sa-Sp	O	Display segment control (key scan)
18	LDC	O	Laser signal output	69-72	K0-K3	I	Key matrix return input
19	FOK	I	FOK signal output	73	Vdd		Power supply (+5V)
20	MON	O	Focus work control	74	Vload		Display driver negative power supply (-35V)
21	CLK	O	Clock signal output	75	AVss		GND
22	LAT	O	Latch signal output	76	REF		GND
23	DATA	O	Data signal output	77	SLT-SW	I	Start limit switch signal input
24	SENSE	I	SENSE signal input from CXD2507AQ	78	OPN-SW	I	Open switch signal input
25	SCOR	I	Sub code frame synchro detection	79	CLS-SW	I	Close switch signal input
26	REM	I	Remote control signal input	80	UP-SW	I	Mechanism up switch signal input

ADJUSTMENT

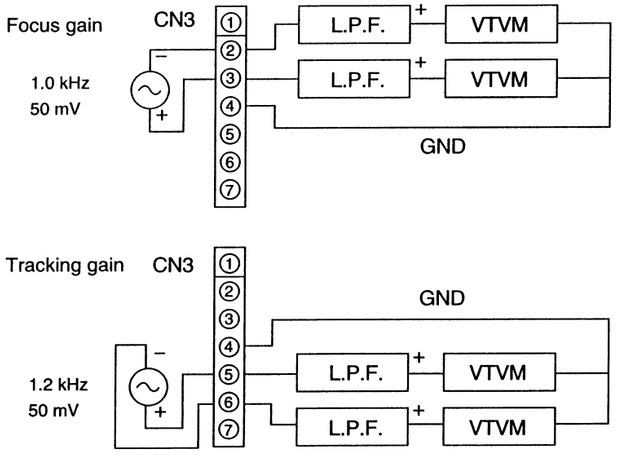
No.	ITEM	INPUT SET-TINGS	OUTPUT SETTINGS	PLAYER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
Remove the clamper ass'y before step 1. And remount it after step 1.							
1	LASER POWER	–	Set the sesor section of the optical power meter on the pickup lens.	With pressing the P.MODE key, turn the power on to enter the test mode. Press the CHECK key to check that the display is "03".	–	On the power from 0.08 to 0.15 mW, when the diffraction grating is correctly aligned with the RF level of 1.0Vp-p or more.	(a)
Cancel test mode and open the tray to load the disc.							
2	TRACKING ERROR	Test disc Type 4	Connect an oscilloscope as follows. CH1:RF (CN3-1) CH2:TE (CN3-6)	Load disc and set to test mode. Confirm the display is "03".	TE BALANCE VR4	Symmetry between upper and lower or DC=VC±0.025V	(c)
3	FOCUS ERROR	Test disc Type 4	Connect an oscilloscope as follows. CH1:RF (CN3-1) CH2:TE (CN3-6)	Press the PLAY key. Confirm that the display is "05".	FE BALANCE VR1	Optimum eye pattern	(d)
4	FOCUS GAIN	Test disc Type 4 Apply signal of 1.0 kHz, 50mVrms to CN3 pin 2-3.	Connect a LPF to CN3 pin 2-3 to which connect an oscilloscope or AC voltmeters.	Press the PLAY key. Confirm that the display is "05".	FOCUS GAIN VR2	Two VTVMs should read the same value.	(e)
5	TRACKING GAIN	Test disc Type 4 Apply signal of 1.2 kHz, 50mVrms to CN3 pin 5-6.	Connect a LPF to CN3 pin 5-6 to which connect an oscilloscope or AC voltmeters.	Press the PLAY key. Confirm that the display is "05".	TRACKING GAIN VR3	Two VTVMs should read the same value.	(e)

Note:
Type 4 disc : SONY YDS-18 Test Disc or equivalent.
LPF: Around 47 kΩ+390 pF or so.
Step 1~5 are in Test Mode.

(a) Laser power

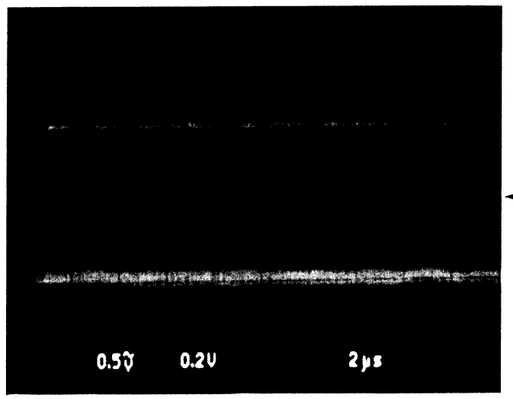


(e) Focus Gain, Tracking Gain



DP-R3070/R4070/R5070

ADJUSTMENT



CH1 RF
0.5 V / div

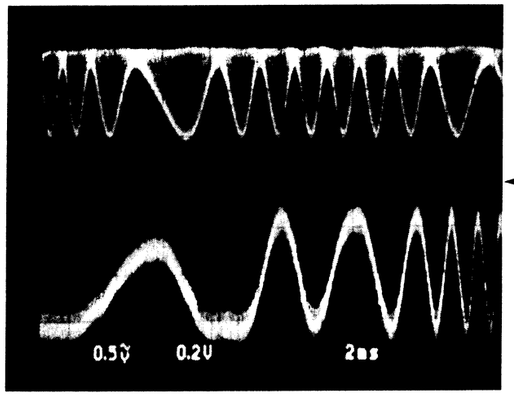
VREF : 2.1 V

CH2 E. Spot
0.2 V / div

2 µsec / div

projection

- RF signal and E. Spot signal in test mode (PLAY).
- If the diffraction grating has been adjusted properly, the influence of triggering is observed on the E. Spot waveform of approx. 18 us after RF signal, in the form of a projection.



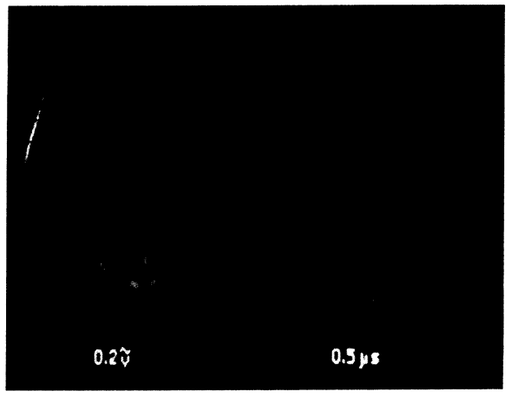
CH1 RF
0.5 V / div

VREF : 2.1 V

CH2 T. Error
0.2 V / div

20 msec / div

- RF signal and T. Error signal in test mode (Focusing ON). (Disc Type 4)
- Adjust T. Error so that the waveform is symmetrical above and below VREF(VR4).

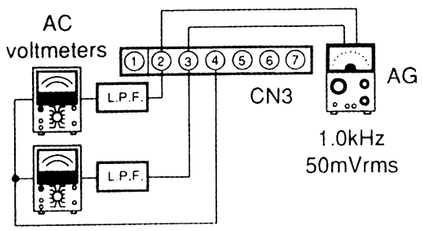


RF signal
0.5 V / div

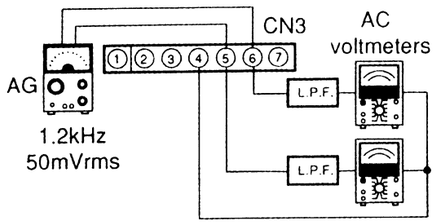
- RF signal in test mode (PLAY).
- Perform the tangential and focusing offset adjustments so that each of the center cross points are focused into one point on the display. The crossing points above and below the center shall also be displayed clearly.

PC BOARD(COMPONENT SIDE VIEW)

(e) Focus gain : Two VTVMs should read the same value.

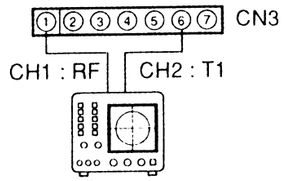


(e) Tracking gain : Two VTVMs should read the same value.

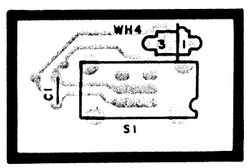


(c) Tracking error : Symmetry between upper and lower or DC=0±0.025V

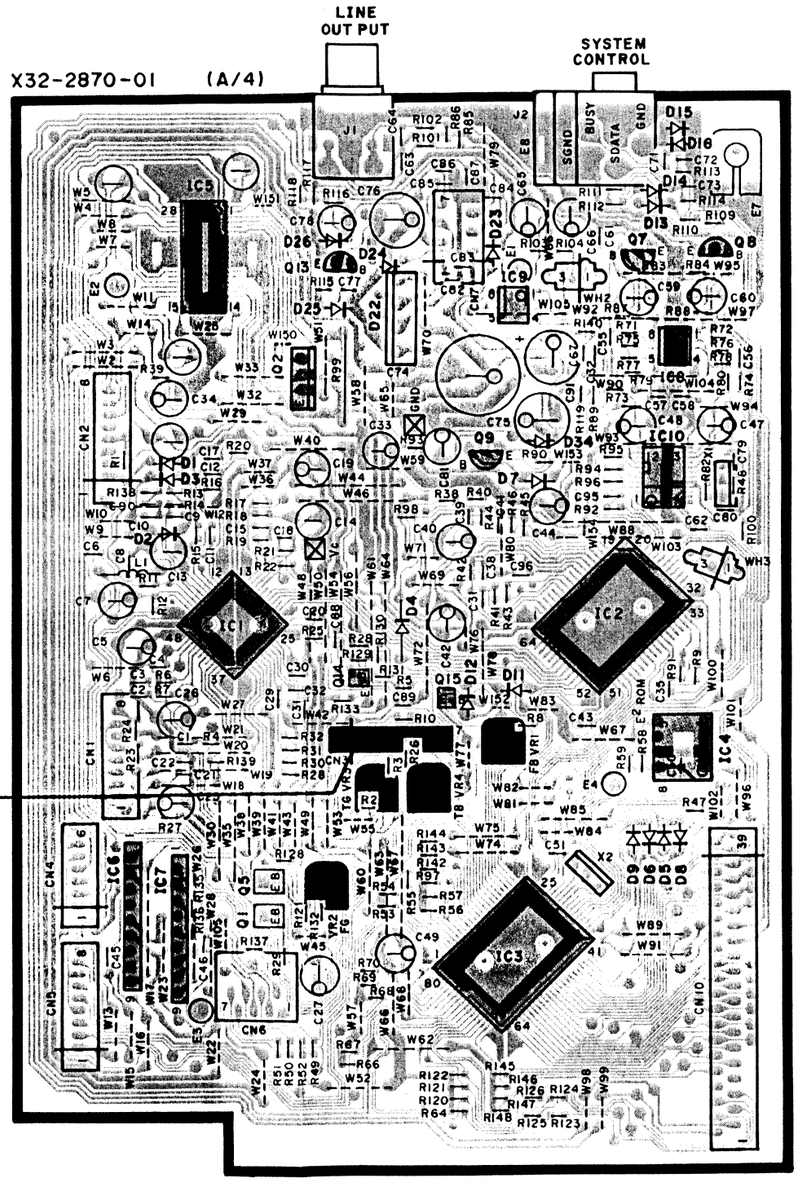
(d) Focus error : Optimum eye pattern

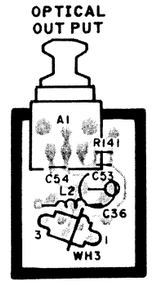


X25 (B/2)

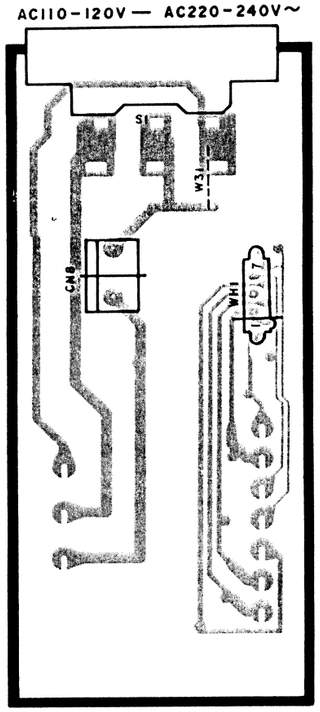


X32-2870-01 (A/4)

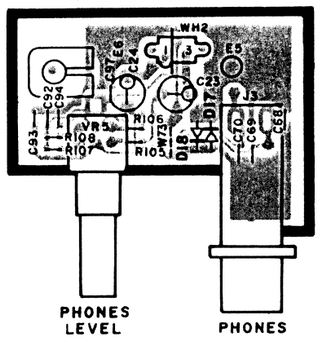




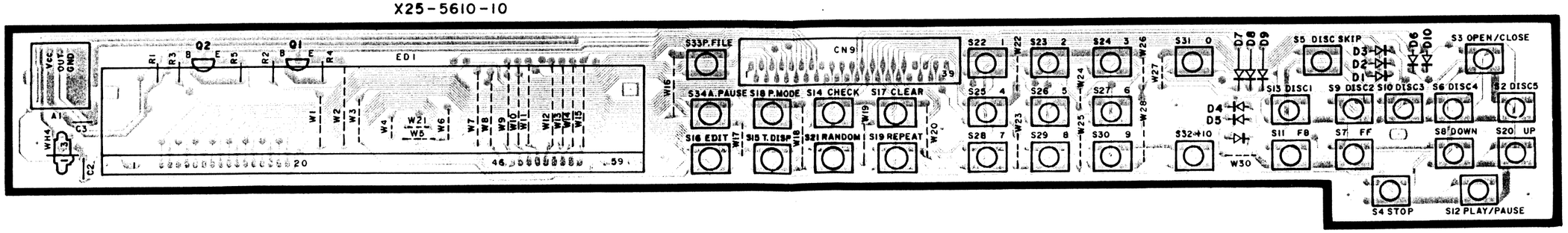
X32 (B/4)
AC110-120V — AC220-240V~



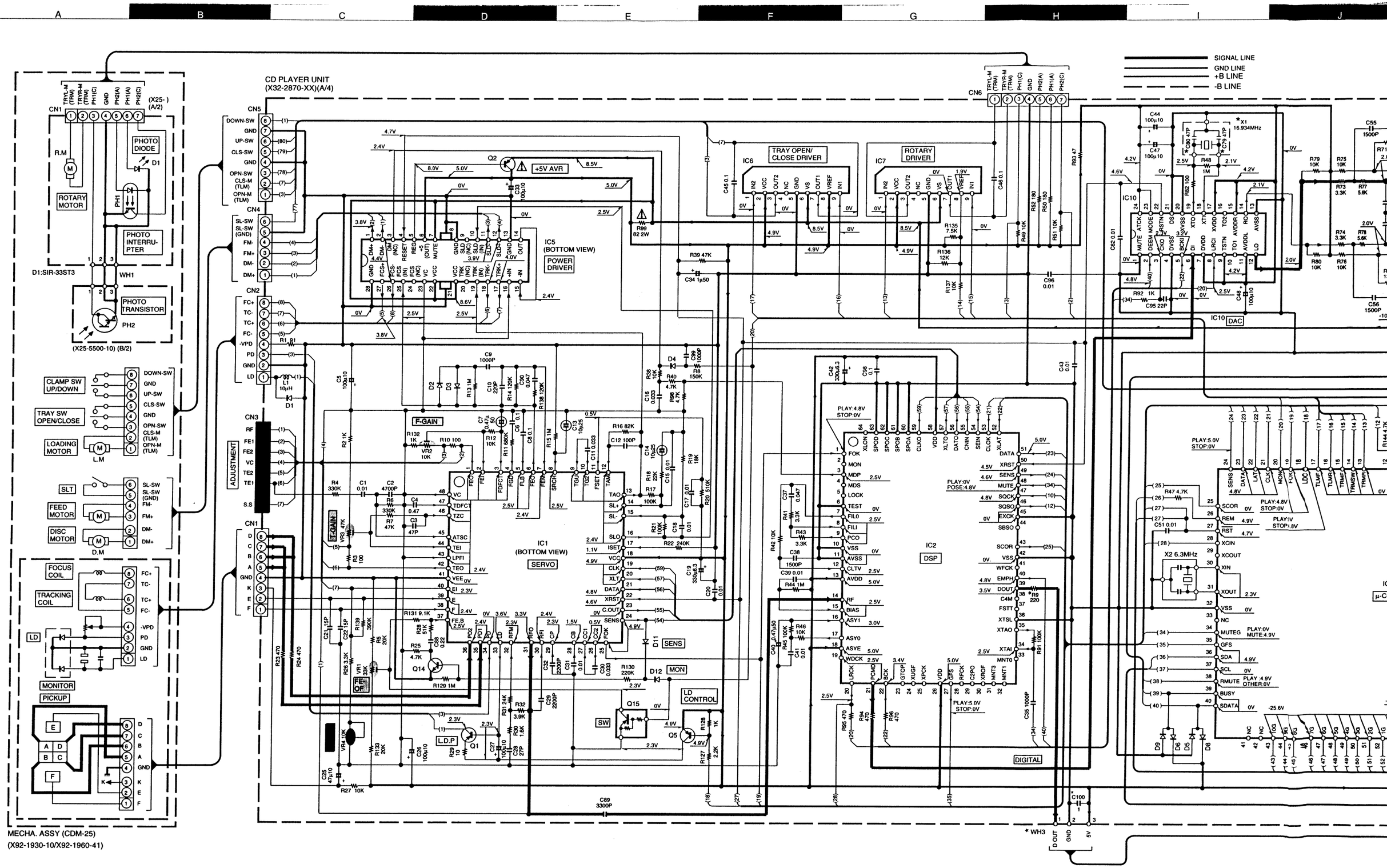
X32 (C/4)



X25-5610-10



Refer to the schematic diagram for the value of resistors and capacitors.



- DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

2SA954
2SC2878

F G H I J K L M N O P

SIGNAL LINE
GND LINE
+B LINE
-B LINE

IC1 :CXA1782BQ
IC2 :CXD2507AQ
IC3 :M38174M8-264FP
IC4 :X24C16
IC5 :BA6198FP
IC6,7 :TA8409S
IC8 :NJM4565M
IC9 :NJM4580E
IC10 :SM5875BM

D1~6,8,9,11~18,27~33 :HSS104 or 1SS133
D7 :UZ-6.8BS(B) or RD6.8ES(B2)
D22 :KBP02ML-6127
D23,24 :1SR139-100 or S5688B
D25 :UZ-30BS or RD30ES(B)
D26,34 :UZ-5.6BS(B) or RD5.6ES(B2)

Q1,5 :2SB1308(Q,R)
Q2 :2SB1565(E,F) or 2SB1375
Q7,8 :2SC2878(B)
Q9 :2SC2785(F,E) or 2SC1740S(Q,R)
Q13 :2SA954(L,K)
Q14 :2SC4081(R,S)
Q15 :UN5112 or DTA124EU

CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

2SA954 2SC2878 | 2SB1565 | 2SC2021F | 2SC2785 | 2SC1740S | DTA124EU 2SC4081 | 2SB1308 | 2SB1375 | X24C16 | NJM4580E | TA8409S

IC1 :CXA1782BQ
IC2 :CXD2507AQ
IC3 :M38174M8-264FP
IC4 :X24C16
IC5 :BA6198FP
IC6,7 :TA8409S
IC8 :NJM4565M
IC9 :NJM4580E
IC10 :SM5875BM

D1~6,8,9,11~18,27~33 :HSS104 or 1SS133
D7 :UZ-6.8BS(B) or RD6.8ES(B2)
D22 :KBP02ML-6127
D23,24 :1SR139-100 or S5688B
D25 :UZ-30BS or RD30ES(B)
D26,34 :UZ-5.6BS(B) or RD5.6ES(B2)

Q1,5 :2SB1308(Q,R)
Q2 :2SB1565(E,F) or 2SB1375
Q7,8 :2SC2878(B)
Q9 :2SC2785(F,E) or 2SC1740S(Q,R)
Q13 :2SA954(L,K)
Q14 :2SC4081(R,S)
Q15 :UN5112 or DTA124EU

(X25-5610-1X) (A/2)

SYSTEM CONTROL
XS
LINE OUTPUT
PHONES LEVEL
PHONES
H.P AMP
E²-ROM
-30V AVR
OPTICAL OUTPUT
POWER SW
REMOTE CONTROL SENSOR

(X32-)(C/4)
(X32-)(B/4)
(X32-)(D/4)
(X25-)(B/2)

D1~10 : HSS104 or 1SS133
Q1,2 : 2SC2021F
ED1 : 10-BT-131GK

(K,P) AC120V 60Hz
(X) AC240V 50Hz
(Y) AC110-120V/220-240V 50/60Hz
(M) AC110-120V/220V 230-240V 50/60Hz
(E,G) AC230V 50Hz

DP-R3070

DESTINATION	ABB.	UNIT NO.	A	B	X32 D/4	S1	R9	R150	C79,80, 100	WH3	W31	X1
U.S.A. CANADA AUSTRALIA EUROPE GERMANY	K P X E G	X32-2870-10	NO	NO	NO	NO	NO	YES	NO	NO	YES	L78-0299
PX	Y	X32-2870-21	NO	NO	NO	YES	NO	YES	NO	NO	NO	L78-0299

DP-R4070

DESTINATION	ABB.	UNIT NO.	A	B	X32 D/4	S1	R9	R150	C79,80, 100	WH3	W31	X1
U.S.A. CANADA AUSTRALIA U.K. EUROPE GERMANY	K P X T E G	X32-2870-11	NO	YES	NO	NO	NO	YES	NO	NO	YES	L78-0299
PX GENERAL MARKET	Y M	X32-2870-22	NO	YES	NO	YES	NO	YES	NO	NO	NO	L78-0299

DP-R5070

DESTINATION	ABB.	UNIT NO.	A	B	X32 D/4	S1	R9	R150	C79,80, 100	WH3	W31	X1
U.S.A. CANADA AUSTRALIA EUROPE GERMANY	K P X E G	X32-2870-12	YES	YES	YES	NO	YES	NO	YES	YES	YES	L77-1164
PX GENERAL MARKET	Y M	X32-2870-23	YES	YES	YES	YES	NO	YES	NO	YES	NO	L77-1164

MODEL NAME	UNIT NO.	C	S33	D10
DP-R3070	X25-5610-10	NO	NO	NO
DP-R4070	X25-5610-11	YES	NO	NO
DP-R5070	X25-5610-12	YES	YES	YES

DP-R3070/R4070/R5070(K)

2SC2021F 2SC2785 2SC1740S DTA124EU 2SC4081 2SB1308 2SB1375 X24C16 NJM4580E TA8409S NJM4565M SM5875BM CXA1782BQ BA6198FP

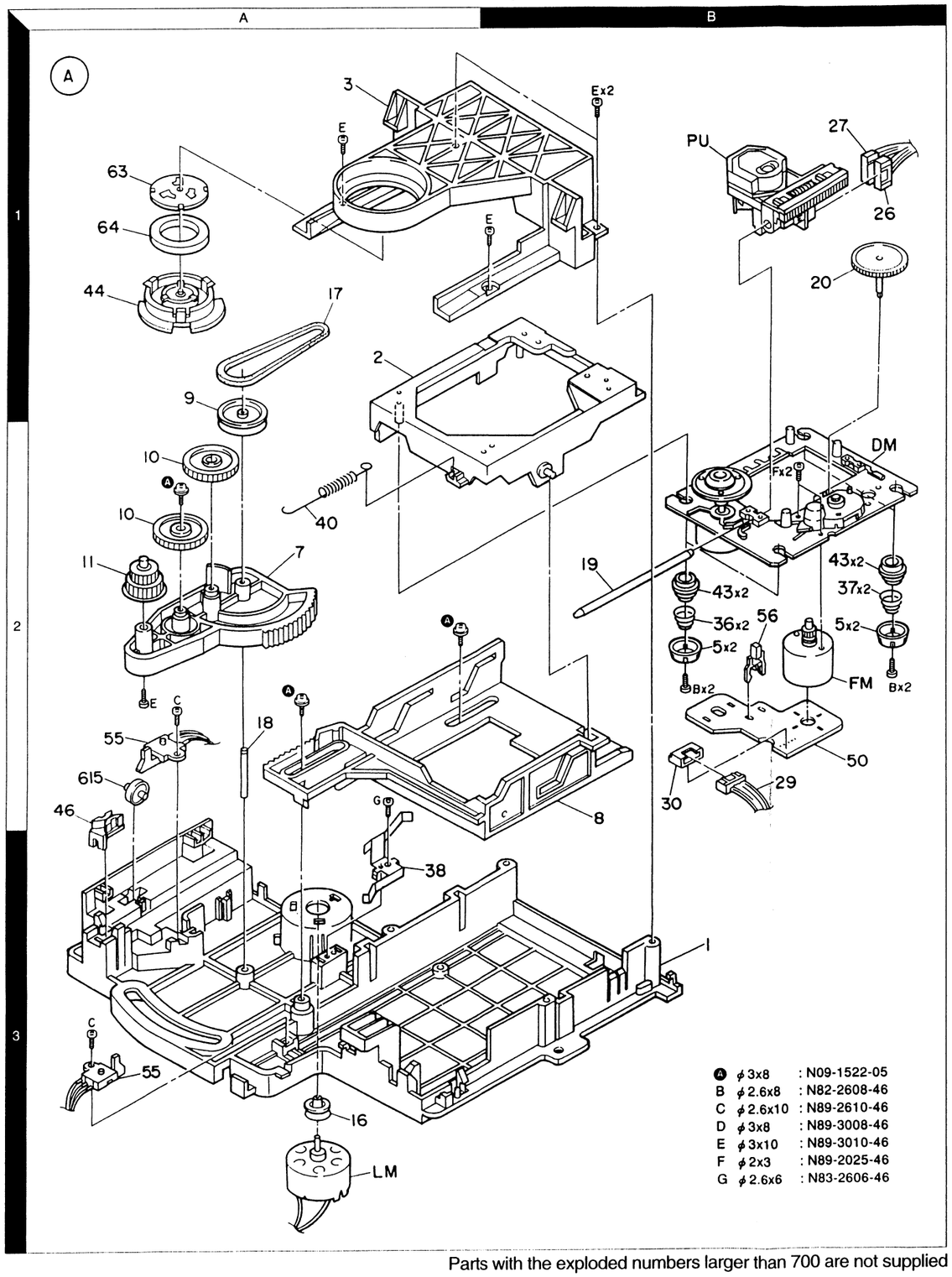
Y22-4050-10

DP-R3070/R4070/R5070

KENWOOD

DP-R3070/R4070/R5070

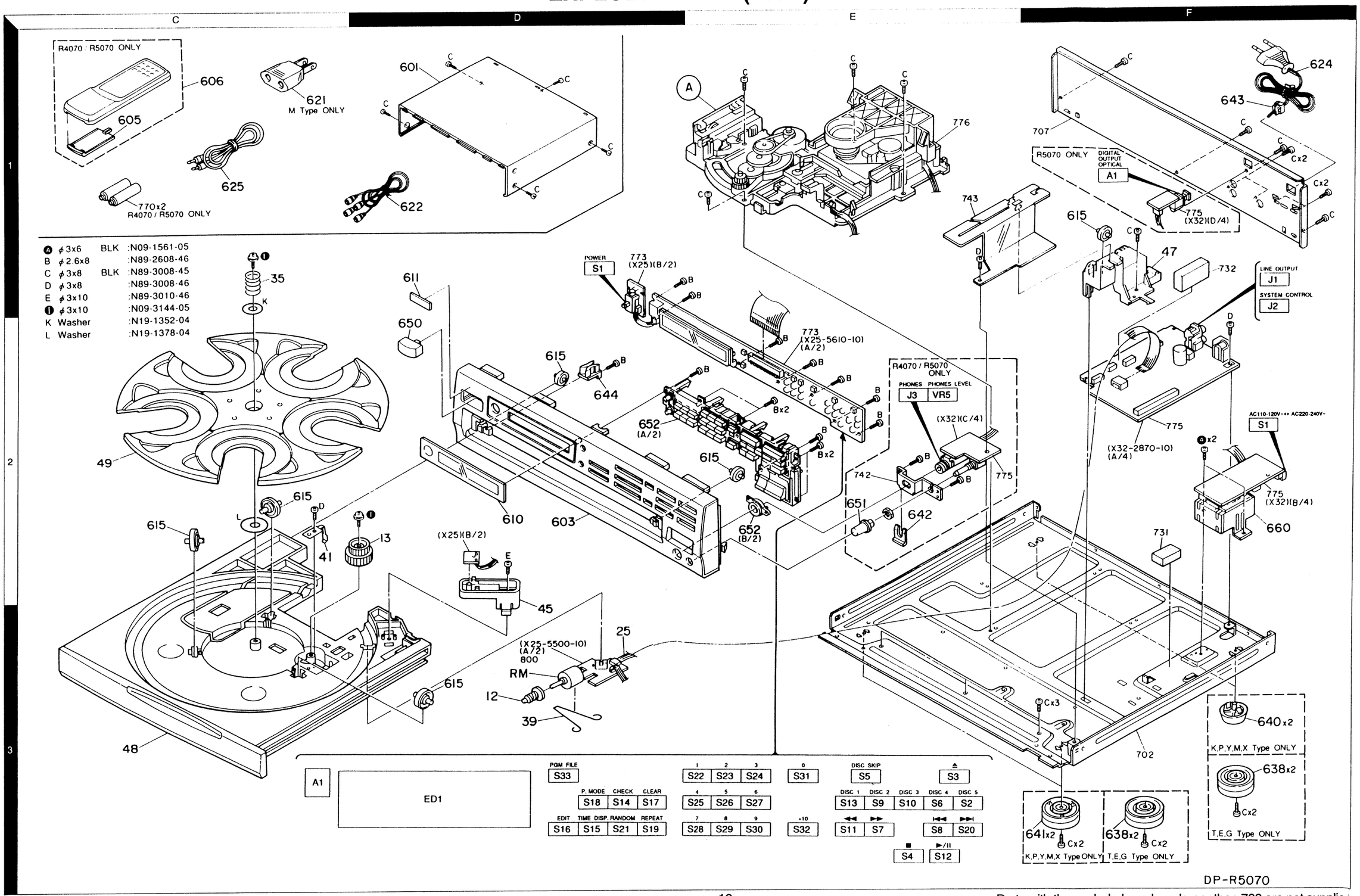
EXPLODED VIEW(MECHANISM)



Parts with the exploded numbers larger than 700 are not supplied

DP-R3070/R4070/R5070

EXPLODED VIEW (UNIT)



DP-R5070

Parts with the exploded numbers larger than 700 are not supplied

DP-R3070/R4070/R5070

PARTS LIST

※ New Parts
Parts without Parts No. are not supplied.
Les articles non mentionnes dans le Parts No. ne sont pas fournis.
Teile ohne Parts No. werden nicht geliefert.

❶

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名/規格	Destination 仕向	Remarks 備考
			DP-R3070			
601	1D		A01-3103-11	METALLIC CABINET		
603	2D	※	A60-0668-01	PANEL		
610	2D	※	B03-2928-04	DRESSING PLATE		
611	1D		B43-0287-04	KENWOOD BADGE		
-		※	B46-0092-43	WARRANTY CARD	KY	
-		※	B46-0096-53	WARRANTY CARD	X	
-			B46-0121-33	WARRANTY CARD	P	
-			B46-0197-00	QUESTIONAIRE CARD	K	
-			B46-0310-03	WARRANTY CARD	EG	
-			B58-0513-04	CAUTION CARD (PRESET220-240)	Y	
-		※	B58-0964-13	CAUTION CARD (CAUTION UL)	KY	
-		※	B58-0965-13	CAUTION CARD (TX TYPE PL)	X	
-		※	B58-0966-13	CAUTION CARD (ELM TYPE PL)	E	
-		※	B58-0967-03	CAUTION CARD (P TYPE PL)	P	
-		※	B58-0970-13	CAUTION CARD (RG TYPE PL)	G	
-		※	B59-1104-00	SERVICE DIRECTORY	Y	
-		※	B60-1914-00	INSTRUCTION MANUAL (EN)	KPYXE	
-		※	B60-1915-00	INSTRUCTION MANUAL (FR)	PE	
-		※	B60-1916-00	INSTRUCTION MANUAL (GER)	EG	
-		※	B60-1917-00	INSTRUCTION MANUAL (D/IT)	E	
-		※	B60-1918-00	INSTRUCTION MANUAL (SP)	E	
615	2D,2E		D14-0357-04	ROLLER		
622	1D		E30-0505-05	AUDIO CORD		
⚠ 624	1F		E30-2592-15	AC POWER CORD	EG	
⚠ 624	1F		E30-2605-05	AC POWER CORD	Y	
⚠ 624	1F		E30-2650-05	AC POWER CORD	KP	
624	1F		E30-2717-05	AC POWER CORD	X	
625	1C		E30-2733-05	CORD WITH PLUG		
		※	H50-1334-04	ITEM CARTON CASE		S
		※	H50-1335-04	ITEM CARTON CASE		W
-		※	H10-5937-02	POLYSTYRENE FOAMED FIXTURE (L)		S
-		※	H10-5938-02	POLYSTYRENE FOAMED FIXTURE (R)		S
-		※	H10-7023-02	POLYSTYRENE FOAMED FIXTURE (L)		W
-		※	H10-7024-02	POLYSTYRENE FOAMED FIXTURE (R)		W
-			H13-0152-04	CARTON BOARD	X	
-			H21-0303-04	PROTECTION SHEET		
-			H25-0232-04	PROTECTION BAG (235X350X0.03)		
-			H25-0319-04	PROTECTION BAG		
638	3F		J02-1024-05	FOOT FRONT/REAR	EG	
640	3F		J02-0366-15	FOOT REAR	KPYX	
641	3F		J02-1122-05	FOOT FRONT	KPYX	
⚠ 643	1F		J42-0083-05	POWER CORD BUSHING		
644	2D		J90-0811-04	GUIDE		
-			J61-0307-05	WIRE BAND	YXEG	
650	2D		K27-2112-04	KNOB POWER		
652	2D,2E	※	K29-6062-02	KNOB		
⚠ 660	2F		L07-0856-05	POWER TRANSFORMER	KP	
⚠ 660	2F		L07-0859-05	POWER TRANSFORMER	Y	
⚠ 660	2F		L07-0860-05	POWER TRANSFORMER	XEG	

L:Scandinavia K:USA P:Canada S:Singapore Made
Y:PX(Far East, Hawaii) T:England E:Europe W:Malaysia Made
Y:AAFES(Europe) X:Australia M:Other Areas

⚠ indicates safety critical components.

※ New Parts
Parts without Parts No. are not supplied
Les articles non mentionnes dans le Parts No. ne sont pas fournis.
Teile ohne Parts No. werden nicht geliefert.

❷

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名/規格	Destination 仕向	Remarks 備考
A	2F		N09-1561-05	TAPTITE SCREW (3X6,+-)		
B	2D,2E		N82-2608-46	BINDING HEAD TAPTITE SCREW		
C	1D,1F		N89-3008-45	BINDING HEAD TAPTITE SCREW		
D	1E,2F		N89-3008-46	BINDING HEAD TAPTITE SCREW		
			DP-R4070			
601	1D		A01-3103-11	METALLIC CABINET		
603	2D	※	A60-0670-01	PANEL		
605	1C		A09-0170-08	BATTERY COVER		
606	1C		A70-0972-05	REMOTE CONTROLLER ASSY		
610	2D		B03-2928-04	DRESSING PLATE		
611	1D		B43-0287-04	KENWOOD BADGE		
-		※	B46-0092-43	WARRANTY CARD	KY	
-		※	B46-0096-53	WARRANTY CARD	X	
-			B46-0121-33	WARRANTY CARD	P	
-			B46-0197-00	QUESTIONAIRE CARD	K	
-			B46-0310-03	WARRANTY CARD	TEG	
-			B58-0513-04	CAUTION CARD (PRESET220-240)	Y	
-			B58-0945-03	CAUTION CARD	T	
-		※	B58-0964-13	CAUTION CARD (CAUTION UL)	KY	
-		※	B58-0965-13	CAUTION CARD (TX TYPE PL)	XT	
-		※	B58-0966-13	CAUTION CARD (ELM TYPE PL)	ME	
-		※	B58-0967-03	CAUTION CARD (P TYPE PL)	P	
-		※	B58-0970-13	CAUTION CARD (RG TYPE PL)	G	
-		※	B59-1104-00	SERVICE DIRECTORY	Y	
-		※	B60-1914-00	INSTRUCTION MANUAL (EN)	KPYMX	
-		※	B60-1914-00	INSTRUCTION MANUAL (EN)	TE	
-		※	B60-1915-00	INSTRUCTION MANUAL (FR)	PE	
-		※	B60-1916-00	INSTRUCTION MANUAL (GER)	EG	
-		※	B60-1917-00	INSTRUCTION MANUAL (D/IT)	E	
-		※	B60-1918-00	INSTRUCTION MANUAL (SP)	ME	
-		※	B60-1919-00	INSTRUCTION MANUAL (C)	M	
615	2D,2E		D14-0357-04	ROLLER		
⚠ 621	1C		E03-0115-05	AC PLUG ADAPTER	M	
622	1D		E30-0505-05	AUDIO CORD		
⚠ 624	1F		E30-2592-15	AC POWER CORD	MEG	
⚠ 624	1F		E30-2605-05	AC POWER CORD	Y	
⚠ 624	1F		E30-2650-05	AC POWER CORD	KP	
⚠ 624	1F		E30-2717-05	AC POWER CORD	X	
⚠ 624	1F		E30-2721-05	AC POWER CORD	T	
625	1C		E30-2733-05	CORD WITH PLUG		
		※	H50-1336-04	ITEM CARTON CASE	KPYXEG	S
		※	H50-1337-04	ITEM CARTON CASE	M	S
		※	H50-1338-04	ITEM CARTON CASE	T	S
		※	H50-1339-04	ITEM CARTON CASE	KPYXEG	W
		※	H50-1340-04	ITEM CARTON CASE	M	W
		※	H50-1341-04	ITEM CARTON CASE	T	W
-		※	H10-5937-02	POLYSTYRENE FOAMED FIXTURE (L)	KPYMX	S
-		※	H10-5937-02	POLYSTYRENE FOAMED FIXTURE (L)	ET	S
-		※	H10-5938-02	POLYSTYRENE FOAMED FIXTURE (R)	KPYMX	S
-		※	H10-5938-02	POLYSTYRENE FOAMED FIXTURE (R)	EG	S
-		※	H10-5939-02	POLYSTYRENE FOAMED FIXTURE (L)	T	S
-		※	H10-5940-02	POLYSTYRENE FOAMED FIXTURE (R)	T	S
-		※	H10-7023-02	POLYSTYRENE FOAMED FIXTURE (L)	KPYMX	W

L:Scandinavia K:USA P:Canada S:Singapore Made
Y:PX(Far East, Hawaii) T:England E:Europe W:Malaysia Made
Y:AAFES(Europe) X:Australia M:Other Areas

⚠ indicates safety critical components.